Title (en)

Surface acoustic wave device, substrate therefor and method of manufacturing the substrate

Title (de)

Akustische Oberflächenwellenanordnung, Substrat dafür und Verfahren zur Herstellung des Substrats

Title (fr)

Dispositif à ondes acoustiques de surface, substrat correspondant et procédé pour la fabrication du substrat

Publication

EP 0999640 A2 20000510 (EN)

Application

EP 99121666 A 19991102

Priority

- JP 31231698 A 19981102
- JP 31289298 A 19981104
- JP 2853899 A 19990205

Abstract (en)

A sapphire single crystal wafer 11 having a diameter not less than two inches and having an off-angled surface which is obtained by rotating an R (1-102) surface about a Ä11-20Ü axis in a negative direction by a given off-angle not less than 2 DEG is introduced in a CVD apparatus. While the sapphire substrate is kept at a temperature about 950 DEG C, a buffer layer made of gallium nitride or aluminum-gallium nitride is first deposited with an average thickness of 0.1-0.2 mu m, and then a aluminum nitride single crystal layer is deposited with an average thickness not less than about 2 mu m. The thus obtained aluminum nitride single crystal layer has not a significant amount of clacks, has an excellent piezoelectric property, and has a high propagating velocity. <IMAGE>

IPC 1-7

H03H 9/02

IPC 8 full level

H03H 9/25 (2006.01); **H03H 9/02** (2006.01)

CPC (source: EP)

H03H 9/02543 (2013.01)

Cited by

US7338555B2; US7220314B2; US6583690B2; KR100388011B1

Designated contracting state (EPC)

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DOCDB simple family (publication)

EP 0999640 A2 20000510; **EP 0999640 A3 20000927**; JP 2000201050 A 20000718; US 6342748 B1 20020129

DOCDB simple family (application)

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